REMARKS

Favorable reconsideration of the subject patent application is respectfully requested in view of the above amendments and the following remarks. Following the amendments, claims 23, 25 and 29-38 are under consideration in the application, with claims 23, 25, 29, 31, 35 and 37 being in independent format.

The specification has been amended to correct the reference to related US Patent 6,242,419. It is urged that support for this amendment may be found throughout the specification as originally filed and this amendment does not constitute new matter or raise new issues for consideration.

Claims 23, 25 and 29-38 stand rejected under 35 USC §112, first paragraph, as lacking an enabling disclosure. Specifically, the Examiner has asserted that "there is no evidence that the polypeptide of SEQ ID NO: 33 would act in the same manner as do SEQ ID NOS: 31 and 32". This rejection is respectfully traversed.

The present claims are drawn, in part, to polypeptides comprising SEQ ID NO: 33, a member of the fibroblast growth factor receptor (FGFR) family known as human FGFR5. The murine FGFR5 polypeptide, referred to as FGFR5β, is provided in SEQ ID NO: 31, with a splice variant of FGFR5β, known as FGFR5γ, being provided in SEQ ID NO: 32.

As noted by the Examiner, the specification teaches that murine FGFR5β (SEQ ID NO: 31) and FGFR5γ (SEQ ID NO: 32) enhance proliferation of adherent peripheral blood mononuclear cells and activate natural killer cells. The Examiner further notes that the presently claimed polypeptide sequence, SEQ ID NO: 33, shares 77.1% and 57.8% sequence homology with SEQ ID NOS: 31 and 32, respectively. As discussed on page 29, line 22 – page 30, line 3, of the specification, residues critical for ligand binding have been identified in other members of the FGFR family, and those residues are either conserved, or a conservative substitution, in the murine FGFR5γ (SEQ ID NO: 32). As evidenced by the Declaration of Dr. Elizabeth Visser, submitted herewith, these residues are also conserved between SEQ ID NO: 32 and the presently claimed SEQ ID NO: 33. In addition, it has long been known in the art that the presence of a heparin-binding domain is important for the biological activity of members of the FGFR family (see, Kan

et al., *Science 259*:1918-1922, 1993). As discussed in Dr. Visser's Declaration, this domain is present in both the murine FGFR5 molecule and in SEQ ID NO: 33.

Applicants thus submit that one of skill in the art would reasonably expect the polypeptide of SEQ ID NO: 33 to possess substantially the same functional properties as the polypeptides of SEQ ID NO: 31 and 32, including the ability to enhance proliferation of adherent peripheral blood mononuclear cells and activate natural killer cells. This expectation is supported by the Declaration of Dr. Greg Murison, submitted herewith, in which the ability of human FGFR5 to augment growth of anti-CD3 stimulated PBMC growth and to stimulate growth of adherent PBMC is demonstrated.

It is thus urged that one of skill in the art, on being provided with the instant specification, would indeed be able to use the presently claimed invention, and that the rejection of the claims under 35 USC §112, first paragraph, may be properly withdrawn.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

Early reconsideration and allowance of the pending claims is respectfully requested.

Respectfully submitted,

Janet Sleath

Janet Sleath
Registration No. 37,007

Date: January 6, 2003
SPECKMAN LAW GROUP

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

--This application is a continuation-in-part of U.S. Patent Application No. 09/383,586, filed August 26, 1999, now U.S. Patent [6,424,419] 6,242,419; which is a continuation-in-part of U.S. Patent Application No. 09/276,268, filed March 25, 1999, now abandoned; and claims priority to International Patent Application No. PCT/NZ00/00015, filed February 18, 2000; and to U.S. Provisional Patent Application No. 60/221,216, filed July 25, 2000.--